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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional): Fischer 45-14-2

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Typed or printed name _____

Application Number	Filed
10/719,655	11/21/03

First Named Inventor: Fischer et al.

Art Unit	Examiner
2627	Glenda P. Rodriguez

Applicant requests review of the final rejection in the above-identified application No amendments are being filed with this request

This request is being filed with a notice of appeal

The review is requested for the reason(s) stated on the attached sheet(s)
Note: No more than five (5) pages may be provided

I am the

- [ ] applicant/inventor
- [ ] assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3 73(b) is enclosed (Form PTO/SB/96)
- [X] attorney or agent of record. Registration number 36,597
- [ ] attorney or agent acting under 37 CFR 1 34. Registration number if acting under 37 CFR 1 34 _____

Kevin M. Mason
Signature

Kevin M. Mason
Typed or printed name

(203) 255-6560
Telephone number

October 26, 2006
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required Submit multiple forms if more than one signature is required, see below*.

- [ ] *Total of _____ forms are submitted.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

Applicant(s):	Fischer et al.
Case:	45-14-2
Serial No.:	10/719,655
Filing Date:	November 21, 2003
Group:	2651
Examiner:	Glenda P Rodriguez
Title:	Magnetic Storage Write Heads Using Micro-Electro Mechanical Shutters

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MEMORANDUM IN SUPPORT OF
PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The present invention and prior art have been summarized in Applicants' prior responses.

STATEMENT OF GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1 through 20 are presently pending in the above-identified patent application. Claims 1-20 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement.

Arguments

The Examiner asserts that the Specification does not address "how the medium is **attached** and how the medium **behaves** when it is allowing or inhibiting the magnetic flux of the write coil." (emphasis added). The Examiner further asserts that the "descriptions are insufficient for one of ordinary skill in the art to understand how is this 'shutter' working in the head in order to selectively allow the magnetic field to alter this magnetic domain."

As indicated in Applicants prior response, Applicants do not allege to have invented a shutter system. In fact, shutters were well known to those of ordinary skill in the art at the time the present application was filed. MEMS shutter arrays were available commercial products at the time the application was filed. See, for example, http://www.electronicproducts.com/ShowPage.asp?SECTION=3700&PRIMID=&FileName=sepOL1.sep2003 (describing a MEMS-based light manipulation technology for display and other light manipulation applications), attached as an Exhibit hereto. Please note the date tag in the URL of September 2003 and the present filing date of November 2003. This commercial shutter array is a matrix of "flipping pixels" that can be opened or closed to allow light through. The documentation associated with such a commercial shutter system would clearly describe how to open or close the shutter.

The Examiner asserts that Applicants do not "specify under which conditions the 'shutter' is activated or enabled to selectively allow or block the magnetic field." Applicants submit that the specific conditions under which the shutter is activated or enabled to selectively allow or block the magnetic field is a design choice, influenced by the particular shutter selected. The composition of the shutter is addressed further below.

The present invention is directed to selectively altering the magnetic domain of a magnetic storage material 150 by controlling the path of a magnetic field 120 *using* one or more shutters 200. In the disclosed magnetic storage system of the present invention, a person of ordinary skill in the art would understand, based on the present disclosure and the commercial availability of such shutter arrays, how to open or close the shutter to selectively allow a magnetic field to alter a magnetic domain of the magnetic storage medium.

In this regard, the present specification teaches:

> In an open position of the shutter 200, the magnetic field 120 is allowed to pass the shutter 200 and will follow an outer loop 130 comprised of magnetic material segments 132, 134, 136 and the magnetic storage material 150. In a closed position of the shutter 200, the magnetic field 120 is not allowed to pass the shutter 200 and will follow an inner loop 140 that bypasses the disk 150 and is comprised of magnetic material segments 132, 134, 136 and 138. In this manner, the magnetic domain of the magnetic storage medium 150 is selectively altered based on the position of the shutter 200.

Original Specification, at page 3, lines 18-24.

FIG. 2, and the corresponding text on page 4 of the specification, illustrate an exemplary shutter array 200. In this regard, the present specification teaches how the shutter array is *constructed* and how it *operates*:

> As shown in FIG. 2, each shutter element 210 can *pivot across a central axis* between an open (not shown) and closed position (shown), in a *similar manner to a venetian blind*. The position of each shutter element 210 can be *controlled*, for example, *using micro electro mechanical systems (MEMS) or other micromachine control elements*. It is noted that micro electro mechanical systems switches are **increasingly used** for optical networks and other applications. In an optical network application, MEMS switches have been employed, for example, to move a mirror that changes the propagation direction of light, or blocks the light entirely. United States Patent Number 5,974,207, for example, discloses a wavelength-selective add-drop multiplexer that uses movable mirrors to add and/or drop spectral components from a wavelength-division-multiplexed optical signal. *Magnetic shielding may be implemented using Nickel (Ni) metallization or Cobalt (Co) deposition on the shutter mechanisms 210*. In this manner, when the shutter elements 210 are in a closed position, the magnetic field will be reflected to the inner loop 140.

Original Specification, at page 4, lines 3-15 (emphasis added).

Shutter Operation (Behavior)

As indicated in the above passage, MEMS devices were well known and already frequently used for other applications at the time of the filing of the present application. United States Patent Number 5,974,207 describes using a MEMS-based actuator to move an optical device, such as a mirror, into, and out of, the path of an optical signal. The operation of the shutter for magnetic applications would be obvious to a person of ordinary skill in the art, based on the teachings of the present invention, United States Patent Number 5,974,207, as well as commercially available shutter devices.

Thus, contrary to the assertion of the Examiner, the present specification gives clear guidance on how the shutters behave. In the above-described exemplary embodiment, the shutters are mounted in an array, such that they can pivot across a central axis between an open and closed position. The pivoting is controlled using MEMS devices which were very well known to those of ordinary skill in the art at the time of filing, as evidenced by U.S. Patent No. 5,974,207 which was cited in the original filing.

Shutter Construction (Shutter Attachment)

Again, in the above-described exemplary embodiment, the shutters are fabricated in an array, such that they can pivot across a central axis between an open and closed position. Such a configuration was very well known to those of ordinary skill in the art at the time of filing. See, for example, the commercial shutter array product referenced above and attached hereto. The pivoting arrangement indicates how the shutters are *attached*.

With regard to the *composition* of the shutters themselves, the original specification teaches that the shutters can be coated with a magnetic shielding, such as Nickel or Cobalt. See page 4, lines 12-13. See also, claims 7-9.

Conclusion

Applicants submit that the claimed subject matter is described in the original specification in such a way as to enable a person of ordinary skill in the art to make and use the invention without undue experimentation. Thus, Applicants respectfully request withdrawal of the rejection of claims 1-20 under 35 U.S.C. §112, first paragraph.

All of the pending claims, i.e., claims 1-20, are in condition for allowance and such favorable action is earnestly solicited.

If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below.

The Examiner's attention to this matter is appreciated.

Respectfully submitted,

Date: October 26, 2006

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